

# Patent [19]

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## [54] AIR PERMEABLE PHOTOCATALYTIC SHEET AND ITS UTILIZATION

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### [57] ABSTRACT

**PROBLEM TO BE SOLVED:** To obtain a filter excellent in air purifying efficiency and sufficiently low in air flow resistance by sticking a fired layer of polytetrafluoroethylene resin containing at least photocatalytic particles to fibers of a mesh-like base body, which is a netlike body made of specific thick fibers and has a specific value of the longitudinal/lateral dimension.

**SOLUTION:** In the production of an air permeable photocatalytic sheet used for the air purification such as reduction of the concentration of malodor or harmful gas or for antibacterial action, the mesh like base body 1, which is the net like body made of  $\approx 1$  mm thick fibers and is controlled to  $\approx 1$  mm in the longitudinal/lateral dimension of the mesh (longitudinal/lateral dimension of the mesh inside), is used and the photocatalyst layer 2 is stuck to the fibers of the mesh like body 1. The photocatalytic layer 2 is provided by coating the mesh like body 1 with a dispersion containing polytetrafluoroethylene powder and the photocatalyst powder, heating the coated product to vaporize and remove a solvent in the coating layer, heating and firing to sinter the polytetrafluoroethylene particles each other, and next, cooling. The filter is formed by laminating plural number of the air permeable photocatalytic sheet.

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